

IES3016L Series

Unmanaged Industrial Ethernet Switch

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【Brief Introduction】

IES3016L series is unmanaged industrial Ethernet switch which includes IES3016L-P (12/48VDC) and IES3016L-4F-P (12/48VDC). All the ports support auto-negotiation, 10/100Mbps, and F/H duplex, etc. All components chosen for the switch are industrial level to ensure high performance. IES3016L series switch provides wide voltage to the device.

【Packing List】

Please check the package and all the components inside are in good condition before you use the switch.

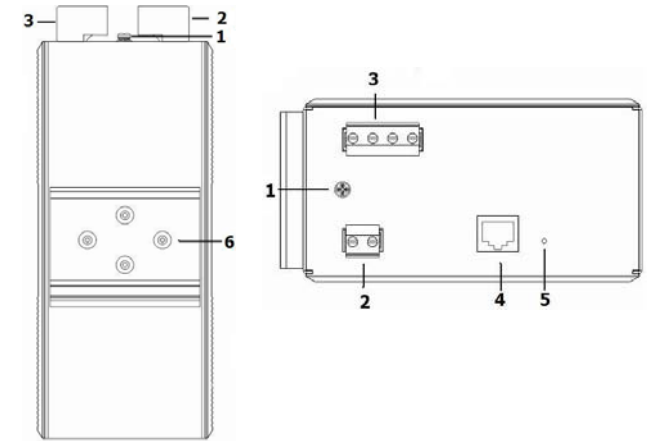
- 3onedata Ethernet switch*1
- User manual
- CD
- Warranty card

【Features】

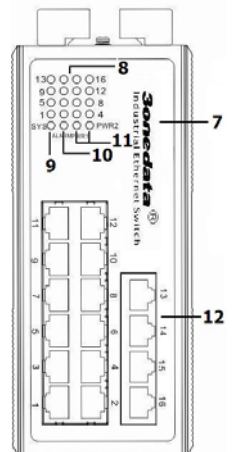
- Support 16 ports (16-FE);
- Support MAC address auto-learning;
- 8K MAC address
- System switching bandwidth 3.2 Gbps
- Support 1 alarm output;
- 0-60℃ working temperature;
- No fan, low consumption design
- IP40 protection

【Panel Layout】

IES3016L-P (12/48VDC):



1. Grounding screw
2. Relay output (2 bits)
3. Power input
4. Console port (RS-232 serial Port, RJ45)
5. Reset
6. DIN-Rail kit
- 7 company logo and product name
8. Port indicator
9. System indicator
10. Alarm indicator
11. Power indicator
12. 10Base-T /100Base-TX port

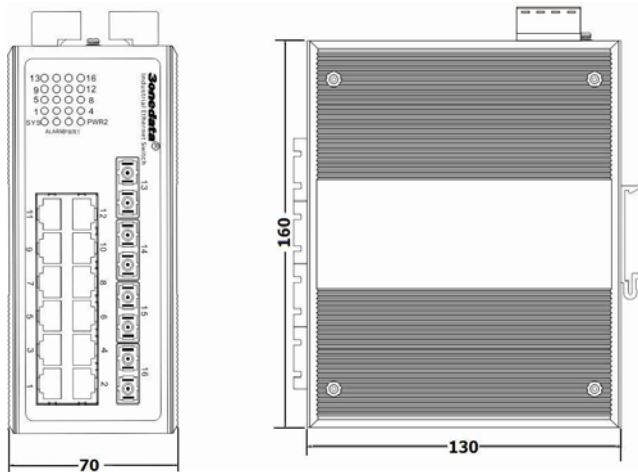


IES3016L-4F-P (12/48VDC):

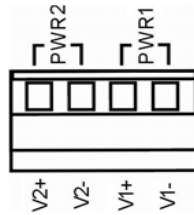
1. Grounding screw
2. Relay output (2 bits)
3. Power input
4. Console port (RS-232 serial Port, RJ45)
5. Reset
6. DIN-Rail kit
7. Company logo and product name
8. Port indicator
9. System indicator
10. Alarm indicator
11. Power indicator
12. 100Base-FX port
13. 10Base-T /100Base-TX port

【Dimension】

Unit (mm)



【Power Input】



Top view



Front view

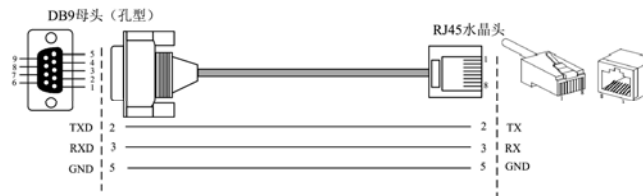
IES3016L series switch provides 4 bits terminal blocks (V1-, V1+, V2-, and V2+).

Notice: 1. power on: please connect the power line to the switch before you plug in the power plug.

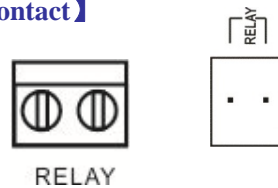
2. Power off: please unplug the switch then remove the power line from the terminal.

【Console Port】

IES3016L series switch provides 1 console port (based on serial port).the console port is RJ45 connector in top panel. It is used to connect the PC for program updating by using a connecting cable along with the switch.



【Relay Contact】



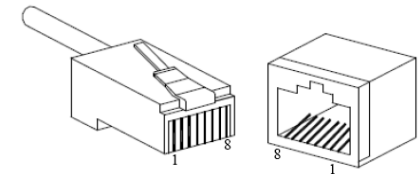
The input terminal block of relay is in top panel of the switch. It is the contact of alarm relay. It will be open circuit when alarm happens, or it will be always closed circuit. IES3016L series

switch supports 1 alarm output to connect alarm indicator or alarm buzzer to remind of operator in time in case of something happened.

【Communication Port】

10/100BaseT(X) Ethernet port

10/100BaseT(X) Ethernet port is in front panel of the device. The connector type is RJ45 and its pin definition is shown below. The pinout of RJ45 port display as below, connect by UTP or STP. The connect distance is no more than 100m. 100Mbps is used 100Ω of UTP 5, 10Mbps is used 100Ω of UTP 3,4,5.

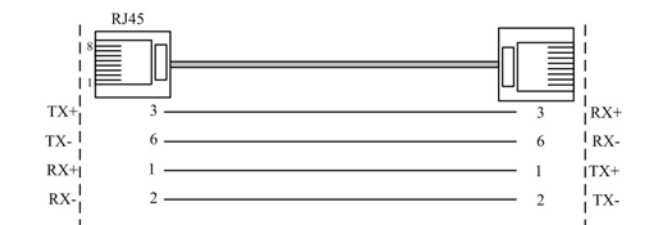


RJ 45 port supports automatic MDI/MDI-X operation. It can connect the PC, Server, Converter and HUB. Corresponding connection of Pin 1,2,3,6 in MDI: 1→1, 2→2, 3→3, 6→6; corresponding connection of pin 1,2,3,6 in MDI-X: 1→3, 2→6, 3→1, 6→2. the definition of Pin in the table as below.

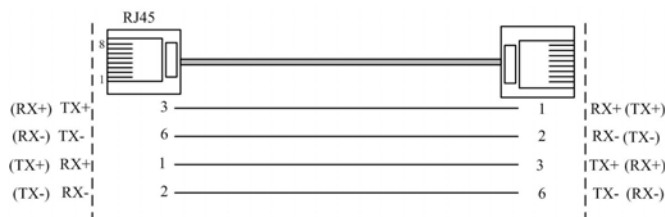
PIN	MDI	MDI-X
1	TX+	RX+
2	TX-	RX-
3	RX+	TX+
6	RX-	TX-
4, 5, 7, 8	—	—

Note: “TX±”transmit data ±, “RX±”receive data ±, “—” no use.

MDI (straight-through cable)



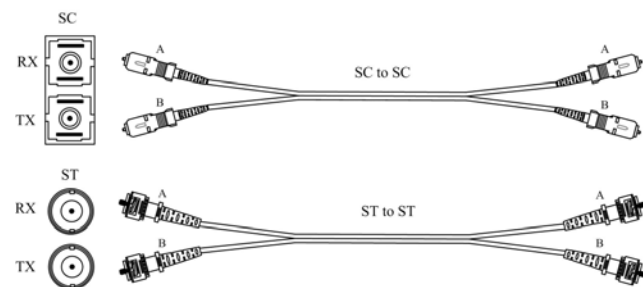
MDI-X (crossover cable)



100Base-FX Fiber Port

100Base-FX fiber port needs to be used in pairs. TX is transmission side to connect to receiving side RX in remote switch;

Suppose: If you make your own cable, we suggest labeling the two sides of the same line with the same letter (A-to-A and B-to-B, shown as below, or A1-to-A2 and B1-to-B2).



【LED Indicator】

LED indicator is in the front panel of IES3016L. The function of each LED is described in the table as below.

System indication LED		
LED	state	Description

PWR1	ON	Power 1 is working.
	OFF	PWR1 is not connected or does not run normally.
PWR2	ON	Power 2 is working.
	OFF	PWR2 is not connected or run normally.
Alarm	ON	Power or port link is broken or failure.
	OFF	power and port link is working well
SYS	ON/OFF	Device does not run normally
	Blink	Device runs well.
Link1~16	ON	Network connection of the port is valid
	Blink	Data is being transmitted
	OFF	Network connection of the port is invalid

【Installation】

Before installation, please confirm that the work environment meet the installation requirement, including the power needs and abundant space, whether it is close to the connection equipment and other equipments are prepared or not.

- Examine the cables and plugs that installation requirements.
- Examine whether the cables be suitable or not (less than 100m) according to reasonable scheme.
- Screw, nut, tool provided by yourself.
- Power need: Redundant, dual 24VDC power inputs(12~48DC)

Environment: -40°C to 75°C

Relative humidity 5% to 95%

Wiring Requirements

Wiring need to meet the following requirements:

- It is needed to check whether the type, quantity and specification of cable match the requirement before cable laying;
- It is needed to check the cable is damaged or not, factory records and quality assurance booklet before cable laying;
- The required cable specification, quantity, direction and laying position need to match construction requirements, and cable length depends on actual position;
- All the cable cannot have break-down and terminal in the middle;
- Cables should be straight in the hallways and turning;
- Cable should be straight in the groove, and cannot beyond the groove in case of holding back the inlet and outlet holes. Cables should be banded and fixed when they are out of the groove;
- User cable should be separated from the power lines. Cables, power lines and grounding lines cannot be overlapped and mixed when they are in the same groove road. When cable is too long, it cannot hold down other cable, but structure in the middle of alignment rack;
- Pigtail cannot be tied and swerved as less as possible. Swerving radius cannot be too small (small swerving causes terrible loss of link). Its banding should be moderate, not too tight, and should be separated from other cables;
- It should have corresponding simple signal at both sides of the cable for maintaining.

【Specification】

Technology

Standard: IEEE802.3, IEEE802.3u, IEEE802.3x

Transmit mode: store and forward

Flow control: IEEE802.3x, back-pressure control

MAC address: 8K

System switching bandwidth: 3.2G

Cache: 256K

Interface

RJ45 port: 10Base-T/100Base-TX, auto-flow control, F /H duplex and support MDI/MDI-X connection

Fiber port: 100Base-FX, SC/ST optional, support single mode (20/40/60/80Km optional), multimode (2/5Km optional) fiber, wavelength is 1310nm

Console port: Serial port

Alarm: 1 alarm information input;

Overload current: 1A@24VDC

Indicator

Run: SYS

Link: Link1~16

Power: PWR

Alarm: Alarm

Power

Input Voltage: 12~48VDC

Input type: 2 bits terminal blocks

Overload current protection: 4.0A (DC))

Support reverse polarity protection

➤IES3016L (DC):

No-load power: 2.0W@24VDC

Full-load power: 4.6W@24VDC

➤IES3016L-4F (DC):

No-load power: 4.8W@24VDC

Full-load power: 7.0W@24VDC

Mechanical:

Shell: IP40

Weight: 1.1kg

Installation: DIN-rail

Dimension (L*W*H): 160mm*130mm*70mm

Environmental

Working temperature: 0~60℃

Storage temperature: -40~85℃

Ambient Relative Humidity: 5%~95%(no condensing)

Approvals

EMI: FCC Part 15, CISPR (EN55022) class A

EMS: EN61000-4-2 (ESD), Level 4

EN61000-4-3 (RS), Level 3

EN61000-4-4 (EFT), Level 4

EN61000-4-5 (Surge), Level 4

EN61000-4-6 (CS), Level 3

EN61000-4-8, Level 5

Shock: IEC 60068-2-27

Free fall: IEC 60068-2-32

Vibration: IEC 60068-2-6

Warranty: 5 years

Certification

CE、FCC、RoHS